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(54) **ADVANCED LEARNING SYSTEM FOR DETECTION AND PREVENTION OF MONEY LAUNDERING**

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(57) **ABSTRACT**

An automated system for detecting risky entity behavior using an efficient frequent behavior-sorted list is disclosed. From these lists, fingerprints and distance measures can be constructed to enable comparison to known risky entities. The lists also facilitate efficient linking of entities to each other, such that risk information propagates through entity associations. These behavior sorted lists, in combination with other profiling techniques, which efficiently summarize information about the entity within a data store, can be used to create threat scores. These threat scores may be applied within the context of anti-money laundering (AML) and retail banking fraud detection systems. A particular instantiation of these scores elaborated here is the AML Threat Score, which is trained to identify behavior for a banking customer that is suspicious and indicates high likelihood of money laundering activity.

Input data, d_t, from entity A

Feature vector x_t